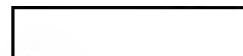


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NRO REVIEW COMPLETED



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22 July 1963

MEMORANDUM FOR: Assistant Director, OSA
Deputy Assistant Director, OSA

SUBJECT : Summary of OSA Activities for week Ending
17 July 1963

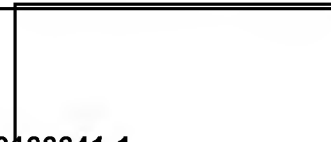
BRIEFINGS

Dr. Gus Kinzel, the Director of Research, Union Carbide Corporation, who was recently appointed Chairman of the CIA Science Advisory Board, was given an orientation briefing on 16 July by several members of the Office of Special Activities on our operational and developmental activities.

IDEALIST

1. Regarding the C¹¹ camera which is being modified for U-2 application, Itek is presently working out the vehicle interface problem. The hatch cover and camera controls have been supplied from IDEALIST assets to Itek to confirm window and control system compatibility. All necessary new parts for the main instrument have been ordered and the mount design has been started. Itek representatives visited Headquarters on 15 July to discuss the flight test program, and another representative will visit Lockheed on 22 July to obtain the technical data required for the installation and flight testing in the IDEALIST aircraft. The estimated delivery date at this time is 1 September with the possibility that delivery may be made sooner.

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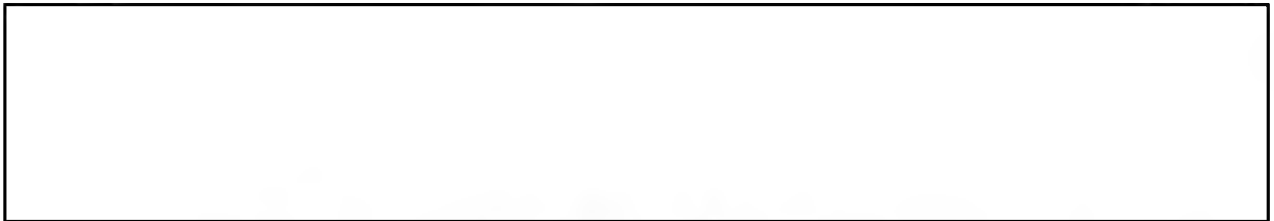
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3. The DAD/OSA had several telephone conversations with Navy Captain Carmody on 15 July regarding the carrier training exercise for IDEALIST aircraft. Admiral Anderson was informed of this plan at a meeting on 13 July at which time he expressed concern over any protracted U-2 operations from the Sixth Fleet carriers in the Mediterranean since this might be discovered and destroy the image the Navy is striving to portray in this area of an impartial "force for peace" on behalf of the Western powers. Mr. Cunningham explained that it was not likely that the U-2 operations would become publicly known since this capability would be reserved in large part for critical targets in that area and elsewhere. Captain Carmody is still attempting to arrange a date for the projected training exercises on the USS KITTYHAWK during the period 3 through 16 August. Plans are being made to brief Vice Admiral Stroup, COMNAVAIRPAC, Captain Horace Epps, Skipper of the KITTYHAWK, and Vice Admiral Rayburn, the head of Naval Research, who are all associated with the carrier operations.

Captain Carmody had spoken to Rear Admiral C. E. Weakley, USN, Deputy Director of Research and Development of the Navy, who controls the Office of Naval Research, about this project, which has been code named WHALE TALE. Admiral Weakley is willing to use the name of the Office of Naval Research in the training exercise on the KITTYHAWK next month.

Captain Carmody, Mr. Cunningham and  went to San Diego on 17 and 18 July to investigate this operation. On 17 July they visited Kelly Johnson at Burbank to inspect the modified fuselage cart/loading sling which is now ready for training tests.

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OX CART

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2. Since spike control feedback is a continuing problem, Lockheed has mocked up new feedback routings. These eliminate some of the bends and should permit the feedback to work somewhat easier. These mock up tubes were sent to [] on July 10 who will make feedback assemblies to these mockups, and return them to Lockheed for installation in the OXCART vehicles.

3. [] is currently working on a procedure to prepare and evaluate proposed modifications to the A-12, A-12 systems or A-12 supporting equipment. This procedure involves a working group and a modification committee [] who will thoroughly examine every proposal before forwarding it to headquarters. The proposal will then be forwarded to headquarters by priority cable slugged "OX CART modify". This procedure is being established in order to provide headquarters with the inputs for final decision on proposed modifications. At the present time no clear-cut method of establishing the requirement for changes to, or modification of, the A-12 exists.

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4. This past week has been very fruitful in improving the [] gyro field and delivery problem. The cause of the overheating problem has been determined and [] is working on a program to eliminate the temperature overflow during the start up. The first three gyros which have [] new bearing-spin motor assembly have been delivered to Minneapolis-Honeywell where they will be monitored by [] and Minneapolis-Honeywell personnel during testing to determine temperature

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control techniques. Minneapolis-Honeywell is placing orders with [] to stock long lead time items (such as float assemblies) which will reduce the turn around time from 90 days to 30 days, providing more useable gyros for our purposes.

5. Regarding the oil consumption problem of the OXCART vehicle, progress has been made in designing and approaching the problem, but further engine development testing is required to confirm attendant fixes. Increased load seals with seal plate modification show promises on initial rig testing at low pressure differential and will be evaluated in engine tests. However, this change, if proven successful, can only be installed in new engines or at overhaul since major engine disassembly is involved. In the meantime, changes to reduce the possibility of seal carrier interference, to improve the seal plate stiffness and flatness, and to improve leakage past static ring seals have been substantiated by engine tests and will be incorporated in engines #131 up in future overhaul guilds.

6. The speed extension flights in the OXCART vehicle thus far have involved reported roughness which is sometimes quite violent. It is believed that this roughness may be caused by the inlet bypass door opening. Pratt and Whitney has established a desired flight program which will eliminate some of the variables and isolate the magnitude of inlet bypass door position effect on engine operation. This program has been submitted to Pratt and Whitney personnel [] and they in turn will propose to Kelly Johnson that these tests be made following the next go with the tilted control schedule.

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7. OXCART Aircraft #122 made an envelope extension flight on 17 July attaining a speed of 2.82 mach at an altitude of 70,000 feet. This is the highest mach reached in the OXCART vehicle to this date. Another envelope extension flight is scheduled for 19 July 1963.

8. The OXCART pilots have all complained of the discomfort of the pressure suits presently being used in the Program. One of the main items of discomfort has been the face mask and neck bearing. As a result of this, a development program is underway by David Clark to develop a neck seal and shoulder mounted helmet to relieve this discomfort.

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A second major item of discomfort is the many straps and tubes passing over the shoulders and back and around the thighs. A program for integrated harness development is planned with David Clark in the near future.

NRO

The D/NRO has directed that the work on the M-2 and C-375 be terminated and that no further effort be directed toward these high resolution area search systems. Instead, the D/NRO desires that additional work be directed toward improving the resolution capability of the present CORONA-MURAL system. He particularly desires that improvements be made that will result in more consistent performance by which the majority of the take can be obtained in the high quality presently realized for a small percentage of the take. The objective is to obtain this maximum performance over most of the total take most of the time. The D/NRO desires a coordinated Program A-Program B proposal for this improvement as soon as possible. Subjects to be considered in the proposal are: Agena stability, V/H sensors, IMC, yaw control, variable exposure, and auto focus.

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ACTION ITEMS

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for

Chief, Programs Staff
(Special Activities)

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Dist:

- 1 - AD/OSA
- 2 - DAD/OSA
- 3 - EXO/OSA
- 4 - DD/R
- 5 - D/FA/OSA
- 6 - D/TECH/OSA
- 7 - C/SD/OSA
- 8 - PS/OSA
- 9 - PS/OSA
- 10 - RB/OSA

PS/OSA: (22 Jul 63)

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